

**APPENDIX E**  
**AIR RESOURCES INFORMATION**

In Washington, the state standards are equivalent to the federal standards in most cases, but more stringent in some instances. Notably, state and federal standards differ on total suspended particulate (TSP) concentrations. The federal standard for TSP was eliminated several years ago when a standard referred to as PM10 was implemented. The PM10 standard is based upon the fraction of total particulates less than 10 microns in diameter. The federal government felt the new PM10 standard was a more accurate measure of the health effects and visibility degradation associated with suspended particles. Washington, however, did not repeal the TSP standard.

Some of the federally-defined "criteria" listed in Table E-1 are subject to both primary and secondary standards. Primary standards are designed to protect health with an adequate margin of safety, while secondary standards are established to protect the public welfare from any known or anticipated effects associated with these pollutants, such as soiling, corrosion, or vegetation damage.

Table E-2 shows estimated CO concentrations for the base year of 1990. These calculations were done for nine intersections in the south Lake Union area as part of the Seattle Commons EIS. The 8-hour NAAQS for CO is 9 ppm and the 1-hour NAAQS for CO is 35 ppm. As shown in the table, predicted average CO concentrations (1990 base year) consistently exceed the 8-hour NAAQS for CO; the intersection of Mercer Street and Westlake exceeds the 1-hour NAAQS for CO.

**Table E-1**  
**Ambient Air Quality Standards**

National Pollutant	<u>EPA</u> Primary	<u>Ecology</u> Secondary	<u>PSAPCA</u> State	<u>PSAPCA</u> Seattle
<b>Total Suspended Particulates (TSP)</b> Annual geometric mean			60 µg/m <sup>3</sup>	60 µg/m <sup>3</sup>
Maximum 24-hour concentration (not to be exceeded more than once annually)			150 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>
<b>Sulfur Dioxide</b> Annual geometric mean	0.03 ppm		0.02 ppm	0.02 ppm
30-day average (never to be exceeded)				0.04 ppm
Maximum 24-hour concentration (not to be exceeded more than once annually)	0.14 ppm		0.1 ppm	
Maximum 24-hour concentration (never to be exceeded)				0.10 ppm
Maximum 3-hour concentration (not to be exceeded more than once annually)		0.5 ppm		
One-hour average (not to be exceeded more than twice per week)			0.25 ppm	0.25 ppm
One-hour average (not to be exceeded more than once annually)			0.4 ppm	
One-hour average (never to be exceeded)				0.4 ppm
Five-minute average (not to be exceeded more than once in eight hours)				1.0 ppm

Notes: ppm = parts per million  
µg/m<sup>3</sup> = micrograms per cubic meter

Sources: PSAPCA Regulation 1, General Requirements (PSAPCA 1989).  
40 CFR Part 50, National Ambient Air Quality Standards (EPA 1988).  
WAC 173-470, 173-474 (Ecology 1987).

**Table E-2**  
**Estimated Average Carbon Monoxide Concentrations**  
**for South Lake Union Intersections**  
(1990 base year)

<b>Intersection Evaluated</b>	<b>8-Hour CO Concentration (ppm)</b>	<b>1-Hour CO Concentration (ppm)</b>
Denny Way at Dexter Avenue	14.6	20.9
Harrison Street at Westlake Avenue	10.2	14.6
Harrison Street at Fairview Avenue	10.7	15.3
Mercer Street at Dexter Avenue	22.0	31.4
Mercer Street at Westlake Avenue	26.3	37.5
Mercer Street at Fairview Avenue	22.3	31.9
Roy Street at Dexter Avenue	12.1	17.3
Broad Street at Ninth Avenue	19.0	27.1

Notes:    ppm = parts per million  
             CO = carbon monoxide

Source: NBBJ 1995.